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A POWER SPRAYER FOR SMALL EXPERIMENTAL PLOTS

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A power sprayer is described for simulating commercial spraying in small experimental plots.

The sprayer is a portable outfit, with a 2-cylinder pump that delivers 4 gallons per minute at 300 pounds' pressure, a 50-gallon tank, and a 1-horsepower gasoline engine. The pump and engine are mounted on top of the tank and placed on a pickup truck. A light-weight iron frame, which supports the 16-nozzle spray boom, is mounted on bicycle wheels. The wheels are attached to the frame



^{1/} Retired 1955.

with U-shaped irons, with one braced to the frame for each wheel. The frame is adjustable so that the wheels can be set to fit rows of any width. The handles are fastened to the frame with U-bolts and can be adjusted for transporting. The height of the boom above ground level can also be adjusted.

This sprayer has been used for several years at the Twin Falls, Idaho, field station to apply insecticides to small plots of onions. Driveways are provided in the field so that the truck can be driven through it and the plots sprayed without using more than 75 feet of hose. The spray is pumped to the boom through a high-pressure hose at 275 to 300 pounds' pressure. The amount of spray applied per minute is determined, and by counting (such as 1,001, 1,002, etc.) as the boom is pushed by hand the operator is able to maintain a fairly even rate of speed, and approximately equal amounts of material are applied to all plots. There is some loss of spray in cutting the nozzles on and off, but this is minimized by quick-acting valves.